

ON A COLLECTION OF MAMMALS FROM THE SMALL ISLANDS OFF THE COAST OF WESTERN PANAMA.

By OLDFIELD THOMAS.

AS with the interesting collection from Coiba Island worked out last year,* I owe to the kindness of the Hon. Walter Rothschild the opportunity of examining a series of mammals obtained by the same collector, Mr. J. H. Batty, on the smaller islands off the same coast, but of the western part of Panama.

The islands visited are all quite small, and close to the mainland, and their fauna would appear to be practically the same as that of the latter, without any marked insular specialisation. At the same time this collection is hardly complete enough, especially in the smaller and more plastic forms, to enable me to make this assertion very positively.

The only new species, the Porcupine (*Coendou rothschildi*), is a highly interesting one, as it belongs to a group not hitherto known to occur in Central America at all. Whether it also is found on the mainland, or is confined to the islands on which Mr. Batty obtained it, remains to be seen.

A very important paper on the mammals of the mainland opposite these islands has recently been published by Mr. Bangs,† and it is this paper that is meant when his name is referred to below.

In the following list the figures following the names of the islands represent the number of the specimens, which it has not been thought worth while to enumerate separately.

1. *Alouatta palliata* Gray.

Sevilla, 5; Almijas, 1; Insoleta, 2.

Like mainland specimens, these Howlers are larger than the small insular form of Coiba I., *A. p. coibensis*, Thos.

2. *Saimiri oerstedii* Reinh.

Sevilla, 3; Almijas, 3.

3. *Molossus obscurus* Geoff.

Gobernador, 1.

4. *Hemiderma perspicillatum* Linn.

Sevilla, 4; Jicarón, 3; Gobernador, 1; Brava, 6; Insoleta, 2; Cebaco, 4.

5. *Glossophaga soricina* Pall.

Gobernador, 4; Insoleta, 1; Jicarón, 3; Palenque, 1; Brava, 16; Parida, 2; Boqueron, 1; Cebaco, 17.

* Nov. Zool. ix. p. 135. 1902. I am informed both by Mr. Batty and my Chiriqui correspondent, Mr. H. J. Watson, that *there are no small mammals on Coiba Island*, a most remarkable and interesting fact. Probably at some period of its history the island was lowered to such an extent as to drown out all burrowing and terrestrial animals, while leaving such species as either were arboreal (Monkeys and Opossum), or were able to live in some slight depth of water or swampy soil (*Odocoileus*, *Dasyprocta*).

† Bull. Mus. Harvard. xxxix. p. 17. 1902.

6. *Artibeus bilobatus* Peters. (*convexus* Lyon).

Brava, 4; Gobernador, 3; Insoleta, 1; Sevilla, 1; Jicarón, 1; Cebaco, 1.

Mr. Lyon has recently separated the Isthmian *bilobatus* under the name of *Uroderma convexum*,* on the ground that the tooth row is more arcuate. But the material available to me does not confirm the separation—at least, on this ground. For of two specimens from Bogava, Chiriqui, collected by Mr. Watson, the tooth row of one is strongly arcuate (breadth across molars 9.8 mm.), as is one from Ecuador, while that of the other exactly matches, in its slight arcuation (breadth 9.0 mm.), an example from Para, Brazil. As the difference between two specimens from one place exceeds that quoted by Mr. Lyon (9.2 compared to 9.6 mm.) I prefer in the meantime, until other characters are pointed out, to use the older name for this bat.

7. *Artibeus watsoni* Thos.

Sevilla, 1; Cebaco, 2.

8. *Vampyrops zarhinus* H. All.

Sevilla, 1.

9. *Potos flavus megalotus* Mart.

Parida, 1; Sevilla, 2; Almijas, 2.

These Kinkajous vary in colour to a certain extent, some of them being almost as pale as Guatemalan specimens of subsp. *aztecus*, but all show an indication of the dark dorsal streak.

10. *Sciurus melania* Gray.

Sevilla, 3; Insoleta, 2; Cebaco, 1; Brava, 3.

11. *Sciurus hoffmanni chiriquensis* Bangs.

Insoleta, 1; Sevilla, 1; Cebaco, 5.

In the Cebaco series there is a considerable variation in the amount and degree of the reddish or yellowish of the belly, two of the specimens being as red below as true *S. hoffmanni*, from which they could hardly have been separated. The others agree closely with *topotypes* from Bogava (Watson coll.).

There can be no question that, whatever other S. American forms may be allied to it, the present Squirrel is entirely distinct from the Guianan *S. aestuans* Linn.

12. *Mus rattus* L.

Brava, 20; Cebaco, 14.

13. *Zygodontomys cherriei* Allen.

Cebaco, 6.

Received from Mr. H. J. Watson from Chiriqui, whence it is also recorded by Mr. Bangs.

The latter author places *Oryzomys chrysomelus* Allen under *Zygodontomys*, but specimens which I refer with confidence to that animal have the typical molar structure of *Oryzomys*, the cross-crochet between the true laminae being clear and well developed.

* *P. Biol. Soc. Wash.*, xv. p. 83, 1901.

But it must be confessed that though essentially *Oryzomys* in tooth structure, the *phocopus-chrysomelas* group are very aberrant, as compared with normal *Oryzomys*, and I would suggest that a special subgenus should be formed for their reception. This might be called *Melanomys* from the general dark colour of its members, and its characteristics would be the short tail and generally Akodont external form of the species, the strictly Oryzomyine molars, the broad-rounded brain-case, short muzzle and well-marked supra-orbital ridges. The type would be *Oryzomys (Melanomys) phocopus* Thos. from Ecuador, to which *O. (M.) chrysomelas* is nearly allied.

14. *Reithrodontomys* sp.

Cebaco, 2.

(Too young for determination.)

15. *Sigmodon* sp.

Cebaco, 8 (mostly young).

16. *Proechimys centralis chiriquinus* Thos.

Gobernador, 15; Brava, 2; Cebaco, 13.

17. *Coendou rothschildi* * Thos.

Sevilla, 5; Brava, 1.

Allied to *C. quichua*, Thos., of Ecuador, but more strongly white speckled, and with various cranial differences. No relationship to the common Central American form *C. mexicanus*.

Size slightly larger than in *C. quichua*. Pelage practically entirely spinous, a few short fine hairs mixed with the spines, but these are only visible on close examination. General colour black, coarsely and numerously speckled with white; rump black. Individual spines of back about 40—50 mm. in length, the basal three-fifths yellowish white, the next two-fifths black or blackish brown, the tips white or (rarely) brownish white. In skins in good condition the basal white scarcely shows through, being hidden by the dark subterminal rings of the spines. Spines of rump shorter than those of body, without the white tips, and with less or no basal white. Fine hairs of muzzle black. Head grizzled black and white, like body. Ears with a small tuft of bristles, mostly white, but some with dark bases. Under surface clothed with spinous bristles, arranged in tufts of three or four together, white basally, brown mesially, and the tips white. Upper surface of hands and feet dark brown. Tail with the upperside of its base coloured and spinous like the rump; sides of base white, grizzled like the body generally; rest of tail (except the tip) uniformly black, clothed with thick coarse black bristles, tip practically naked.

Skull rather larger than that of *C. quichua*, very variable in shape, as usual in this group. Dorsal outline more inflated above the orbits than above the squamosals, the converse being the case in *C. quichua*; supra-orbital and parietal ridges well defined. Nasal opening larger, and, especially, wider than in *C. quichua*. Muzzle rather more thrown forward, the incisors pointing less directly downwards. Palatal foramina long and wide, but in no two specimens alike. Anterior cheek-tooth (p^4) scarcely or not larger than the molars.

* Preliminary description, *Ann. Mag. N. H.* (7), x. p. 169. 1902.

Dimensions of the type, measured in the flesh :—

Head and body, 410; tail, 330; hindfoot s.u. 60, c.u. 68 mm.

Skull, basilar length, 71 mm.

Skull of a larger specimen (No. 1082) female, also from Sevilla :—

Greatest length, 88; basilar length, 74; zygomatic breadth, 50; nasals, 26 × 18; inter-orbital breadth, 30; height of frontal inflation from palate, 31·5; height of brain-case from between bullae, 26; width of nasal opening, 17; diastema, 25; palatal foramina, 10·5 × 5·5; length of tooth-row, 17·5 mm.

Hab. Sevilla (type) and Brava Is.

Type: Male. Original number 723. Collected January 24th, 1902, by J. H. Batty.

This animal is a most interesting discovery, for it has no connection with the only Porcupine, the hairy *C. mexicanus*, hitherto known from Central America. It is a member of the *C. bicolor* group, which is now shown to range from Bolivia (*C. simonsi*) through Peru (*C. bicolor*) and Ecuador (*C. quichua*) northwards to the present locality. As might be expected, it is most nearly allied to the last-named, but is more heavily white-speckled than that animal, besides differing in various cranial details.

To *C. prehensilis* there is an even stronger superficial resemblance than is the case with the other species of the group, but all are readily distinguished from that animal by the rump spines being differentiated from those of the body in colour and length.

18. *Sylvilagus gabbi* All.

Gobernador, 6.

19. *Tamanduas tetradactylus* L.

Gobernador, 1; Cebaco, 2.

These specimens are not unlike the form described by Gray as "var. *opistholeucus*." (Type from Colombia.) Mr. Bangs uses Cope's name "*sellata*," originally based on a Honduras example.

20. *Cholaepus hoffmanni* Peters.

Espartal, 2; Sevilla, 1; Cebaco, 7.

21. *Didelphis marsupialis* Linn.

Sevilla, 2; Afuera, 2; Gobernador, 3; Tologa, 1; Brava, 5; Cebaco, 3.

As on the mainland, these island opossums differ much among themselves, but none are as uniformly brown-faced as the Coiba form, *D. m. battyi*.

22. *Metachirus (opossum) fuscogriseus* Allen.

Sevilla, 2.

23. *Caluromys laniger pallidus* Thos.

Brava, 1; Gobernador, 1; Cebaco, 2.